DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 7, 2011 has been entered.

Response to Arguments

2. Applicant's amendments, see page 1 of the replacement drawings, in remarks filed June 7, 2011, has been fully considered, and the objection of the drawings has been withdrawn.

3. Applicant's amendments, see page 2 in the remarks, with respect to claim 1, has been fully considered, and the objection has been withdrawn.

4. Applicant's arguments filed against the rejections of claims 1-5 have been fully considered but they are not persuasive.

With respect to applicant's arguments that Tahara does not teach a pattern being transferred, it is clearly shown in Tahara that a thermal head (37/7) is used to heat the transfer sheet and transfer the transfer layers (33/34/35 or 2/5) (Figures 4 and 7) onto a substrate (6 – Figure 7).

With respect to applicant's arguments that the references do not teach moving a heat source in a predetermined direction in which the visual effect of the hologram or

grating is obtained, Examiner agrees that the visual effect is not limited to the horizontal direction. However, Tahara shows in Figure 4 that the transfer adhesive layer (35) is being placed on a substrate, moving in the right direction. Figure 5 also shows that the structure in the reflective layer is being formed, and thus obtained, as it moves in the right direction. Therefore, it would be implicit that the thermal head would be moved in the same direction as the transfer layers are being heated and applied. Souparis further teaches using a heated roller (31, 32) to ensure that the application of heat and pressure laminates the transfer film (24) and the substrate, where it is also implicit that the rollers will move over the surface, and thus the direction, the grating is formed.

Therefore, all rejections are maintained.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1 and 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Tahara (US 5,744,219) in view of Souparis (US 5,928,456).

With respect to claim 1, Tahara discloses a foil transfer method, including preparing the thermal transfer sheet (40) having the transfer layer (33/34/35 or 2/5), in which the hologram or the diffraction grating is formed in such a way that a visual effect by an interference pattern thereof is obtained in only one direction (column 14, lines 61-64), transferring to the transfer object the transfer layer in which the hologram or

diffraction grating is formed by moving a heat source (37/7) of a unit area in a predetermined direction contacting (Figures 4 and 9) with a side of the base material (31/4).

Tahara does not specifically disclose wherein the predetermined direction of the heat source is set to be the direction in which the visual effect of the hologram or the diffraction grating is obtained.

Souparis discloses a transferring method, including moving a heat source (31/32) of a unit area in a predetermined direction contacting with a side of the base material (1) wherein the predetermined direction of the heat source is set to be the direction in which the visual effect of the hologram or the diffraction grating is obtained (i.e. horizontal direction, see figure 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the horizontal heat source movement taught by Souparis with the method of Tahara. The motivation would have been to ensure reaction/attachment of the transfer layer to the substrate (column 4, lines 45-48).

With respect to claim 2, Tahara discloses the heat source is a heat generation element of a thermal head (column 14, lines 61-64).

7. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being anticipated over Tawara (JP 08-258437) in view of Souparis (US 5,928,456).

With respect to claim 1, Tawara discloses a foil transfer method, including preparing the thermal transfer sheet having the transfer layer (6/7/8), in which the hologram or the diffraction grating is formed in such a way that a visual effect by an interference pattern thereof is obtained in only one direction, transferring to the transfer

object the transfer layer in which the hologram or diffraction grating is formed by moving a heat source (see paragraph 0004) of a unit area in a predetermined direction contacting with a side of the base material (4) to transfer the transfer layer (Figure 1). Tawara does not specifically disclose wherein the predetermined direction of the heat source is set to be the direction in which the visual effect of the hologram or the diffraction grating is obtained.

Souparis discloses a transferring method, including moving a heat source (31/32) of a unit area in a predetermined direction contacting with a side of the base material (1) wherein the predetermined direction of the heat source is set to be the direction in which the visual effect of the hologram or the diffraction grating is obtained (i.e. horizontal direction, see figure 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the horizontal heat source movement taught by Souparis with the method of Tawara. The motivation would have been to ensure reaction/attachment of the transfer layer to the substrate (column 4, lines 45-48).

With respect to claim 2, Tawara discloses the heat source is a heat generation element of a thermal head (See paragraph 0004).

With respect to claim 4, Tawara discloses the hologram is a rainbow hologram (See paragraph 0016).

With respect to claim 5, Tawara discloses the hologram is a computer hologram having interference patterns each being formed as band-shaped element range (See paragraph 0015; and 0026).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tahara (US 5,744,219) in view of Souparis (US 5,928,456), as applied to claim 1 above, and further in view of Hattori et al. (US 2002/0168513)

The teachings of claim 1 are as described above.

Tahara does not specifically disclose the heat source is a laser. However, Hattori et al. disclose an imaging method, including in the art of holographic transfer (paragraph 0225) it is known as an art-recognized equivalent to substitute a laser for a thermal head as a source of heat during thermal transfer (paragraph 0211). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the art-recognized equivalent laser for the thermal head heat source disclosed by Tahara.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SONYA MAZUMDAR whose telephone number is (571)272-6019. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sonya Mazumdar/
Primary Examiner, Art Unit 1745